

**REMARKS**

Applicants have amended claims 1, 5, 10, 11 and 13. In view of these amendments, claims 8 and 17 – 21 appear to applicants to be duplicative of claims presented herein and have been cancelled without prejudice. New dependent claims 22 and 23 have been added.

Presented claims 1, 4 – 7 and 9 – 16 stand rejected under 35 USC 103(a) as being obvious over US 5,777,877 to Beppu et al in view of Maki et al US 5,307,261. Applicants request reconsideration of this rejection, especially in view of their amendments.

In spite of many similarities between the systems disclosed in the Beppu et al and Maki et al references, Examiner's collection of prior art is still missing the necessary elements that provide applicants' system its great usefulness: the identification, proper classification and display of all related items (with records in the database) that might be affected by a change to an changed item including those related items that require further analysis before being classified as either affected or non-affected and the simultaneous separate display of lists of affected, non-affected and further analysis required items with facility for easily manually moving analysis required items to one of the affected and non-affected lists as analysis is performed. It is this facility and display that enables an operator contemplating a change to an item perform a properly organized search for other items that may be affected by the change and to be certain that the results of the search are complete. Applicants have further amended their claims to point out the elements that make this possible.

For an item in a database that is to be changed, applicants' invention identifies related items in the database that might be affected by the change and lists these identified items in display window 202 (Fig. 2). According to predetermined rules, applicants' invention attempts to determine whether each of the identified related items that might be affected will or will not be affected and, if a determination can be made, assigns each to the appropriate list that is

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additionally displayed at 204 and 208. But the predetermined rules do not always cover all situations; and those related items for which no such determination can be made are assigned to a third list displayed in display window 206. An operator can then consider and analyze each of these listed items one at a time and manually assign each to an appropriate one of the affected or non-affected lists, with an appropriate updating of the display. When no more items are shown in the analysis required list at 206, the operator is free to take a different one of the affected items and repeat the process. The system will maintain and display the search results in an organized state so that, when there are no more affected items on which to search, the operator knows that the search is thorough and complete. Neither of the prior art systems discloses this.

Examiner states that Beppu discloses the display of a list of items that require further analysis and points to Figure 13, which Examiner characterizes as “the UI element used to further classify objects.” This characterization is irrelevant to applicants’ invention. Figure 13 shows an entry screen for providing information in a new record about the engineering change (EC) itself, such as the reason for the change (EC factor), application condition, status, etc. It is not the result of any search of existing records; it identifies no parts, products, customers, material specs, suppliers of existing parts or other items with records already in the database that might or might not be affected. It has no functional connection with the display of Figure 6. Figure 13 of Beppu does not provide facility for characterizing or classifying any record already in the database on the basis of whether or not it will be affected by a change to another item having a record already in the system. The screen shown in Figure 13 of Beppu is a standard format input screen, and anything input to it is totally new information that did not exist in the database until it was input. In contrast, Examiner is invited to examine the following language of claim 1 as presented:

...each record corresponds to and includes information concerning  
an item associated with the complex system, said information

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including an identification of records of related items that could be affected by a change to the changed item....

This language is intended to make clear that the items have corresponding records in the database prior to initiation of the searching and classification of the invention and it is these items, already in the database, that must be, and are, searched to determine if they are affected. If a record (such as the Engineering Change Info record of Figure 13 in Beppu) is added to the database as a result of a contemplated change in an item in the database, then no search is required to locate that record: the searcher is already aware of it, since he just added it. It is the multitude of records corresponding to items already in the database that must be searched for affected items; and Figure 13 makes not reference to such items. Thus Figure 13 of Beppu neither anticipates nor provides prima facie obviousness for applicants' recitations concerning the list of items (already in the database) requiring determination of addition to the affected list or the non-affected list.

In addition, Figure 6 of Beppu does not show any list of items requiring further analysis before being identified as affected or non-affected. Non-affected items are in plain boxes, affected items are either in boxes with diagonal lines ("recomposed") or boxes with double borders ("ready for recomposition"). Both of the latter appear to applicants as being already indicated as affected items. This provides a context in which steps S65 and S66 may be understood. Applicants read these steps as referring to the rules regarding recomposition: that is, rules about how an item is to be changed. Applicants believe that this is the difference between items in Figure 6 shown as "recomposed" (the change is made automatically according to the stored rules) and those "marked for recomposition" (the rules are insufficient to determine how, so it is marked for manual recomposition). But in each case there is an indication that the item is an affected item – the only difference is how the change is to be made. Applicants' invention is, in contrast, concerned with

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determining whether an item is to be changed, and applicants see no such category and no such list in Beppu. And applicants see no disclosure in Beppu (C7, L3-10) that the screens of Figure 6 facilitate the manual changing of the categorization of items shown.

All this is not surprising. Beppu shows a system for making changes to a production version of a product corresponding to changes in a design version of the product. The relationship between the two is very close and limited; and the purpose of the Beppu system is, to the greatest degree possible, to make the necessary changes automatically. Applicant's invention applies to much larger and more complex system of parts, products and other items, wherein total automation of the process is not possible and, in fact, wherein the discovery of what related items are affected by a change to a single item is a significant hurdle requiring a great deal of human effort. Thus, applicants' invention is a mechanized guide and record keeper to help a human operator conduct the necessary searches while providing guidance and record keeping in an organized manner.

In the present office action, Examiner does not state that Maki discloses any list of items for which additional analysis is required before being placed in the affected or non-affected list. Examiner relied totally on the Beppu disclosure for this claimed feature of applicants' invention. Since applicants are also unaware of any such teaching in Maki, they assume they and the Examiner are in agreement on this point and will include no further discussion of Maki.

Applicants have added a new claim 22 dependent on apparatus claim 1 and a new dependent claim 23 dependent on method claim 14, which claims recite the additional capability of applicants' system and method to offer a choice between different relationships defining the related items. This feature is described in applicants' specification and is illustrated in the tabs above window 202 with an example of four different relationships. A complete search would normally involve performing the method (or using the system) with each of the

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relationships, although in some cases a smaller number of the relationships might be sufficient. This feature provides an additional level of sophistication and completeness to applicants' basic system that is not shown in the prior art and should be patentable even if no other claims were.

Since the relied upon prior art is missing a significant functional element of every one of applicants' presented claims, applicants request that the rejection of their claims be withdrawn and the claims allowed to proceed to issue.

Please charge any deficiencies and credit any overpayment to Deposit Account No. 50-0831.

Respectfully submitted,

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Attorney - Reg. No.  
(248) 813-

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "P. M. Griffin", is written over a horizontal line.

PATRICK M. GRIFFIN  
Attorney - Reg. No. 29716  
(248) 813-1215